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10/712,312	11/14/2003	Hitoshi Yamagami	723-1451	8866

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EXAMINER	
THOMASSON, MEAGAN J	

ART UNIT	PAPER NUMBER
3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/712,312	YAMAGAMI, HITOSHI	
	Examiner	Art Unit	
	MEAGAN THOMASSON	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/14/03,1/14/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The examiner acknowledges the amendments made to claims 1, 2, 4-7 and 9-11. Claims 3, 8 and 12-22 are canceled. Additionally, the examiner acknowledges the amendments made to the specification and abstract filed on March 4, 2008.

Election/Restrictions

Applicant's election with traverse of claims 1-11 in the reply filed on March 4, 2008 is acknowledged. The traversal is on the ground(s) that applicant's claims as currently amended in the claim set filed March 4, 2008 are not directed toward divergent subject matter from the claims originally presented for examination. The examiner finds this to be persuasive, as the claims no longer recite "preventing writing of last game data if ... circuitry determines that two or more selectable areas are not present", the limitation necessitating restriction by original presentation made by the examiner on August 22, 2007. As of the amendments filed on March 4, 2008, the claims contain limitations drawn to the embodiment of the invention examined in the office action mailed March 1, 2007. As a result, the examiner agrees that the newly amended claims are no longer patentably distinct from the claims as originally examined, and therefore the election/restriction requirement is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,2,4-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al. (US 5,609,525), Smith, "The Scientist and Engineer's Guide to Digital Signal Processing, Circular Buffering", (1997, Pages 506-509) herein referred to as "Circular Buffering", and further in view of Carrel et al. (US 5,778,167).

Regarding claims 1,5,10 and 11, Ohno discloses a game machine that is provided with an electrically rewritable non-volatile memory (col. 5, lines 42-45; Ohno discloses the primary embodiment as utilizing a volatile SRAM, but also contemplates the use of a non-volatile EEPROM) having two or three game data backup areas, said game machine capable of writing game data to said backup areas, (col. 5, lines 31-37), comprising

a backup memory area selector for selecting, as a write-objective backup area for storing last game data (Fig. 10, ST6),

a backup area containing previously stored game data of older writing age among said two or more backup areas (Fig. 10, ST7),

a memory controller for writing the last game data to a backup area selected as said write-objective backup area selected by said area selector(col. 5, line 66 – col. 6, line 3),

a processing mechanism for determining whether or not a writing of the last game data can be performed by said memory controller (col. 5, line 60 – col. 6, line 3)

a selection repeator for repeating a selection of the write-object backup area, if it is determined that writing of the last game data can not be performed (Fig. 10, ST9 step b)

a writing prohibitor for prohibiting a writing to said write-objective backup area only when a backup area containing game data saved before the last game data becomes selectable as a write-objective backup area (Fig. 10, ST7, wherein any non-selected SRAM area is given write protection, including the area containing game data written immediately before last game data). Additionally, in the abstract Ohno discloses that "the saved memory is write protected when the save memory does not perform the save operation".

Ohno does not specifically disclose the use of a memory area selection process that evaluates memory areas to determine the oldest writing age among said memory areas. Instead, Ohno allows the player to choose the memory area that they would like

to assign the backup game data to be written to. However, "Circular Buffering" teaches the use of a circular buffer in writing data to memory, as a well known data management technique. As a circular buffer writer pointer steps incrementally through areas where data is to be stored and all of the storage areas become full, the buffer writer pointer resets and begins to write over the first area containing the oldest written data (see P. 507; Fig. 28(a) and 28(b) in addition to the third paragraph describing the operation of a circular buffer, including "When a new sample is acquired, it replaces the oldest sample in the array"). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the circular buffer technique taught by "Circular Buffering " to write over the oldest data set in the memory storage areas of Ohno as circular buffering is a well known data managing technique. Thus, all of the claimed elements were known in the art at the time of the invention and it would have been obvious to one of ordinary skill to combine a circular buffering technique with the gaming data storing device of Ohno using known methods with no change in their respective functions in order to yield predictable results.

Additionally, *Ohno does not specifically disclose memory write attempt repeater programmed logic circuitry to repeatedly attempt writing to the write-objective backup area for a predetermined number of attempts, and the writing prohibitor programmed logic circuitry to prohibit writing of the last game data to said game data backup areas and end a game data backup area writing process without storing said last game data if attempting a writing of said last game data to said selected write-objective backup area is unsuccessful after said predetermined number of attempts.* However, Carrel discloses

a system and method for data storing that utilizes a counter for counting the number of write attempts that have been made and terminates the attempted write procedure if the counted number of write attempts is greater than or equal to a predetermined number of write attempts (NUM_ATTEMPTS < maximum number of attempts; col. 4, lines 35-65). Additionally, Carrel discloses if the write assignment is successful the processor is "instructed to perform a WRITE-VERIFY (a write followed by an immediate read to determine if the correct data has been written and can be read" (col. 4, line 65 – col. 5, line 2), wherein a determination is then made as to whether the WRITE-VERIFY was successful (step **86**) and if WRITE-VERIFY did not complete successfully, the system loops to determine if the value in NUM_ATTEMPTS is less than the maximum number of attempts permitted. If NUM_ATTEMPTS is less than the maximum number of attempts permitted, the system will continue attempting to reassign the address of the damaged block and attempt to write to the reassigned block (col. 5, lines 3-14). That is, if there are no spare blocks, i.e. backup areas, remaining and the number of attempts made to write the data to a current block is greater than a maximum number of attempts, the system ends the write attempt process without saving the data (col. 4, lines 49-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the circular buffer technique taught by "Circular Buffering " to write over the oldest data set in the memory storage areas of Ohno in combination with the writing prohibitor that prohibits writing of data to a backup area after a predetermined number of attempts have been made to write data to said backup area as all of the

claimed elements were known in the art at the time of the invention and it would have been obvious to one of ordinary skill to combine a circular buffering technique with the gaming data storing device of Ohno and the predetermined number of write attempts using known methods with no change in their respective functions in order to yield predictable results.

Regarding claims 2,6,7 wherein said memory write determination programmed logic circuitry includes a historical information storage programmed logic circuitry to for recording historical information, said historical information including information relating to a write age of generated game data and being included as part of said last game data. That is, Ohno discloses recording historical game data information relating to a writing age of generated game data as shown in Fig. 6, wherein the year, month, date, day of the week, hour and minute are recorded. Additionally, "Circular Buffer" describes the process by which the age of data relative to a write age of other stored game data is determined, wherein the write-objective backup area that is selected for writing contains data that was written earlier than the last data based on the write age (Fig. 28(a) and 28(b) shows data storage areas labeled as "newest" and "oldest", wherein the terms "newest" and "oldest" are comparative terms that indicate a time of occurrence and/or write time).

Regarding claims 4,9,11 Carrel discloses message displaying programmed logic circuitry to display a predetermined alarm message when the writing is prohibited by said writing prohibitor in col. 4, lines 39-42).

Response to Arguments

Applicant's arguments filed March 4, 2008 have been fully considered but they are not persuasive. Specifically, page 16 of applicant's remarks argue the following:

> "Applicant's claimed implementation does not operate or function in the manner of a 'circular buffer' memory, nor is the operation of a conventional circular buffer memory in any way remotely suggestive of applicant's claimed implementation for at least the following reasons:
>
> Applicant's claimed implementation sets forth a game data backup arrangement and method which ensures that the backup memory will always contain a copy of the *last most recent previously saved game data* (i.e., saved game data that was generated during the immediately preceding game play session) and that this copy of the last previously saved game data will *not* be overwritten even when attempting to save data from the same game"

The examiner does not find this to be persuasive, as the circular buffer will also always contain the last, most recent, previously saved data as it eliminates the oldest data. As shown in "Circular Buffer" Fig. 28(a) and (b), the oldest data is always overwritten with the newest data, guaranteeing that the last, most recent, previously saved data is not overwritten when attempting to save new data. As shown in Fig. 28(a), at a given instant the area containing the newest data entry of -0.113940 is area x[n], the area containing the last, most recent, previously saved data entry of -0.228918 is

area x[n-1], and the area containing the oldest entry of 0.048679 is area x[n-7]. At the next instant, when the new entry of -0.06222 is to be written into a backup area, area x[n-7] containing the oldest entry of 0.048679 is overwritten, and the last, most recent, previous entry of -0.228918 is unchanged.

Additional arguments drawn to the limitations of a writing prohibitor ending the write attempt process when a predetermined number of repeated attempts and only a backup area containing game data saved immediately before the last game data is available are moot in view of the new grounds of rejection. Further, the limitation of a predetermined number of attempts was not included in the previously examined claim set as suggested by applicant's remarks (P. 10), and therefore the new grounds of rejection are necessitated by applicant's amendments made to the claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEAGAN THOMASSON whose telephone number is (571)272-2080. The examiner can normally be reached on M-F 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meagan Thomasson/
July 11, 2008

/XUAN M. THAI/
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